HAZARD-SPECIFIC ANNEX A — TAB B
TYPHOONS — AGENCY PREPARATIONS

I. *Immediate Response Needs*

The following is a list of response materials and supplies which were required as the Response Agency Coordinators (RAC) prepared and responded to Supertyphoon Pongsona after the All Clear signal was given on December 9, 2002.

These are the items required for every typhoon and should be sourced and purchased orders processed when Condition 2 is announced so that response efforts are not delayed before, during and immediately following the storm.

A. Immediate Needs Required PO s at Condition 2:

- Flashlights, Batteries
- Raingear
- Whistles, gloves
- Bottled Water
- Chainsaw, Chainsaw kits and Machetes

B. MOU s required with local vendors

- Communication equipment
- Generators at Critical Facilities (as identified on the Generator Plan)
- Portable Toilets
- Bottled Water
- Security for EOC, Shelters, DRCs
- Fuel for Response Vehicles and Generators (Gasoline and Diesel)
- Chainsaw, Chainsaw kits and Machetes
- Emergency Vehicles (4x4 or SUV)
- Ambulances (DoD Support)
- Specific Agency Requirements
  a. GPA for power poles, bucket trucks, transformers, insulators, wires
  b. GTA for T1 cards, generators
  c. GPD/GFD generators for lab and communications
  d. EPA generators for lab and PCB test kits, debris contractors
  e. DPW/P&R dump trucks, front loaders, back hoes, debris contractors, traffic lights
  f. GWA water tankers, Buffaloes, Bladders, Trailer trucks to pull tankers
  g. DPHSS/GMH vaccines, medical supplies

C. Critical Facilities Requiring Backup Generators

- Guam Memorial Hospital
- Port Authority of Guam
- Communications, E911, GPD, GFD, EOC
- EAS Stations

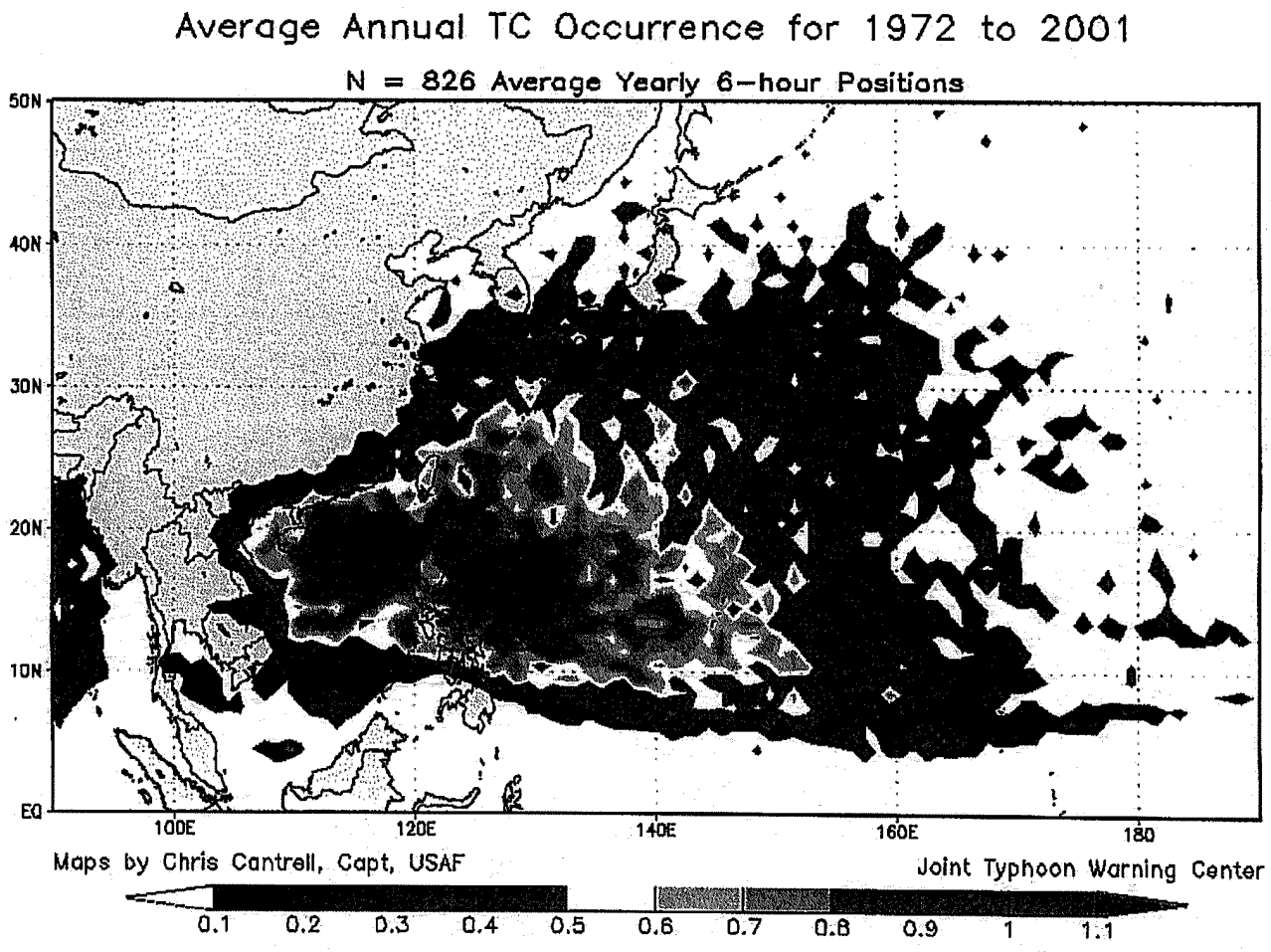
D. Immediate Needs from FEMA Warehouse

- Tarps
- Cots/Blankets
- 5gal Water Containers
- Water Bladders
- Tents/tent Kits
- Diapers/Baby Food
- MREs

A

HAZARD-SPECIFIC ANNEX A – TAB C
TOTAL TROPICAL STORM OCCURRENCES
For the years of 1972 to 2001

Best track positions with an intensity of 25 kts or greater



A

HAZARD-SPECIFIC ANNEX A — TAB A
TYPHOON CHECKLIST

I. Pre-Event

Condition 3 —

- The Governor in coordination with Commander, U.S. Naval Forces Marianas, will jointly issue notices to alert the public to make preparations for the incoming storm
and changes of conditions.
- Activate Emergency Alert System (EAS).
- NWS Heavy Weather Briefing for all Mayors and Vice Mayors.
- NWS Heavy Weather Briefing for all RACs.
- Response agencies begin agency specific pre-event preparations.

❑ *RAC initiate contact with vendors and make emergency procurements in preparation for post-event response needs (see attached Tab B immediate needs requiring purchase orders).*

❑ *Initiate MOUs & MOAs in preparation for post-event support and supply needs.*

- EOC prepares for activation of Life Support System.

❑ All emergency communication equipment (hand-held radios and cellular phones) tested and ready for emergency use.

- *Information & Planning initiate the situation status report, update RAC data base, implement EOC recording and documentation process.*

❑ Notify /Contact FEMA Region IX.

- The Joint Information Center is activated and maintains contact with all media
sources.

❑ Shelters identified.

❑ Implement Functional Annex G (Evacuation Plan).

- ❑ Governor may issue a Declaration of Emergency allowing GovGuam agencies to make emergency procurements from their Operating Budgets.

Condition 2 –

- ❑ EOC RAC activated for a 12hour shift work period.
- ❑ Emergency Alert System (EAS) activated.
- ❑ Emergency shelters opened (if conditions warrant).
- ❑ All vulnerable and critical public facilities secured.
- ❑ EVAC operations implemented.
- ❑ Activate EOC security.
- ❑ Emergency vehicles (buses & vans) deployed to pre-designated locations.
- ❑ All non-essential vehicles are to be turned in to DPW (4x4, trucks).
- ❑ Emergency road and debris clearing equipment deployed to pre-designated locations.
- ❑ Response materials, supplies, manpower and equipment identified.
- ❑ Emergency generators fueled and tested.
- ❑ Water tankers prepared and deployed to pre-designated locations.
- ❑ Staging areas identified for management and collection of debris.
    - *Identify response needs & shortfalls continue to make emergency procurements.*
- ❑ *Compile list of initial immediate needs not available on island and transmit to FEMA Region IX.*

Condition 1 - TAKE COVER

- ❑ All Response Agencies lock down at the EOC and prepare for post-event activities. EOC 24hr operations (RAC plan Shift Work).
- ❑ EVAC operations review and update Functional Annex E.

II. Post-Event

Condition 4 - Governor issues All Clear and initiates Response & Recovery Operations

- ☐ OCD coordinates damage assessment with GHURA, DPW, Commerce and Agriculture. Agencies and Departments conduct own assessments.
- ☐ Road clearance and debris management activities begin.
- ☐ A Governor's Authorized Representative (GAR) identified by the Governor as OCD prepares Presidential Disaster Declaration Request if warranted by PDA.
- ☐ Information & Planning documents Response Agency request for assistance.
- ☐ Federal Response Coordination Annex H implemented in anticipation of a Presidential Disaster Declaration.
- ☐ Close out shelters.

HAZARD-SPECIFIC ANNEX A
TROPICAL CYCLONES (I.E., STORMS AND TYPHOONS)

Primary Agency: All Agencies
Support Agency: All Agencies

I. Nature of the Hazard

Severe weather systems include thunderstorms and tropical cyclones. A tropical cyclone is a general term for all large circulating weather systems over tropical waters. Tropical cyclones are classified by their intensity and include Tropical Depressions, Tropical Storms, Typhoons and Super Typhoons. 70% of the world's tropical cyclones form in this region of the Pacific. Tropical cyclones can strike Guam anytime throughout the year. A tropical cyclone becomes "significant" with the issuance of the first numbered warning by Joint Typhoon Warning Center as reported by the National Weather Service, Guam. Tropical cyclones in the intensity classifications of Tropical Storms, Typhoons and especially Super Typhoons can cause severe damage and destruction to property and infrastructure as well as cause injuries or death. The longer a tropical cyclone remains near or over Guam the more potential exists for severe damages as structures weaken from extended wind stress, flooding increases and storm surges batter the shores. A tropical storm lingering over Guam for ten hours can sometimes cause more damage and destruction than a typhoon that quickly passes over Guam.

Severe winds are generally categorized into two groups, "damaging wind" and "destructive wind". "Damaging wind" is defined as sustained wind with average speeds between 39 and 57 miles per hour (mph). "Destructive wind" has an average sustained wind speeds 58MPH and above. Weak Tropical Storms generate damaging winds. Severe Tropical Storms, Typhoons and Super Typhoons generate damaging winds.

As a typhoon approaches, the weather could be clear until just a few hours before it strikes Guam, at which time the skies will begin to darken and winds will grow in strength. As a typhoon nears land, in addition to damaging winds, we are very concerned about the dangers of torrential rains and storm surges. A single typhoon can last for more than 2 weeks over open waters and can run a path across the entire length of the Western Pacific. Typhoon season runs from the first of June until the end of November. Yet, typhoons have occurred in every month of the year. Typhoon winds blow in a large spiral around a relative calm center known as the "eye." The "eye" is generally 20 to 30 miles wide with the "eye wall", the immediate perimeter of the "eye", having the strongest winds. However, with large typhoons damaging winds may extend outward 400 miles. Although the weather can be calm within the "eye", the backside of the "eye wall" can be expected without warning with damaging winds coming from the opposite direction.

A. Hazard Agents

The primary hazard agents associated with tropical cyclones are the high, sustained winds; flooding from storm surge or heavy rains; battering from heavy waves; and a variety of secondary hazards.

- High Winds: The high winds impose significant stress loads on structures, both direct wind pressure and drag, and tend to propel loose objects at high velocity.

- Flooding: Tropical cyclones can cause many different types of flooding. Along the shoreline, the flooding may occur from storm surge, wind-driven water in estuaries and rivers, or torrential rain. The flooding can be still water flooding or velocity flooding caused by wave action associated with wind driven water along the shoreline. The rainfall associated with some tropical cyclones is on the order of 6 to 12 inches, with higher levels common. The rain may precede tropical cyclone landfall by hours and may persist for many hours after landfall, causing severe flooding

- Heavy Waves: The tropical cyclone may generate waves up to 25 feet high. These can batter the shoreline, causing devastating damage to the shoreline itself and to structures near the shore. The velocity of the water moving back and forth undermines the foundations of building and piers by removing the soil from around them. Debris driven inland by the waves can cause severe structural damage; persons exposed to the moving water and debris are likely to receive severe injuries.

- Secondary Hazards: Tropical cyclones can also cause numerous secondary hazards. Electric power outages are common. Contamination of water supplies, flooding of sewage treatment facilities, and even telephone system failure may occur.

II. Purpose

The purpose of this annex is to provide and identify actions to take

- Prior to
- During, and
- Immediately following a tropical cyclone forecasted to or already impacting the island.

III. Situation and Assumptions

A. Situation

The formation of a Tropical Disturbance can intensify into a Tropical Cyclone (e.g., Tropical Depression, Tropical Storm (Categories A or B), or Typhoon (Categories 1 through 5)) impacting Guam in less than 72 hours (3 days). However, there have been cases of intensification into a typhoon in only 30 hours. Tropical cyclone development and intensification can begin right over Guam. The premise of this annex starts with the understanding that Guam may receive damaging winds (39 mph sustained winds or higher) any time of the year within 72 hours of a tropical cyclone development. The threshold for activation of this plan and annex for government-wide preparedness and response actions is based on the landfall of damaging winds on Guam. However, the Office of Civil Defense, under case-specific direction of the Governor, may provide limited warnings or department/activity specific precautionary actions on a lower threshold such as the onset of damaging winds (39-57 mph sustained winds) or a severe thunderstorm.

The Joint Typhoon Warning Center (JTWC), based in Hawaii, provides track and intensity forecasts for all tropical cyclones in our region. The National Weather Service (NWS), Guam evaluates JTWC forecasts for potential effects upon United States interests in the region, and issues public announcements/advisories about these threats, including thunderstorms. NWS broadcasted information and public media releases include classification (i.e., Thunderstorm, Tropical Disturbance, Tropical Depression, Tropical Storm categories, or Typhoon categories), position, wind strength, precipitation, wave height, and forecast of direction and intensity. The NWS uses the key words, Alert, Watch and Warning, in this order, to describe the increasing concern of a severe weather system approaching Guam. A NWS "alert" announcement indicates a severe weather system formation has started. A NWS "watch" announcement indicates that the severe weather system poses a possible threat generally within 48 hours. A NWS "warning" announcement indicates that severe weather impacts are expected from the approaching weather system within 24 hours. The general public, especially those living in substandard constructed homes, and organizations with planned events may pay special attention to these NWS Alerts, Watches and Warnings.

1. NWS Tropical Cyclone classifications:

(1) Tropical Disturbance or Tropical Cyclone Formation Alert. Not a tropical cyclone but an area with the potential for development into a tropical cyclone.

(2) Tropical Depression. A tropical cyclone with maximum sustained winds of 38 mph or less. At this classification a tropical cyclone number is assigned.

(3) Tropical Storm Category A (weak tropical storm). A tropical cyclone with maximum sustained winds within the range 30-49 mph. Peak gusts are 40-64 mph. At this classification, a tropical cyclone name is assigned, usually after the tropical cyclone's maximum sustained wind speed is 39 mph (causing damaging winds) or higher. A Tropical Depression is within the Category A Tropical Storm classification but does not generate damaging winds and does not usually have a name assigned yet. Typical potential damage from a Category A Tropical Storm includes damage done to only the flimsiest lean-to type structures; unsecured light signs blown down; minor damage to banana trees and near-coastal agriculture, primarily from salt spray; some small dead limbs, ripe coconuts, dead palm fronds, and papaya leaves blown from trees.

(4) Tropical Storm Category B (severe tropical storm). A tropical cyclone with maximum sustained winds within the range 50-73 mph. Peak gusts are 65-94 mph. A Category B Tropical Storm generates damaging winds when its sustained winds reach 58 mph or higher. Typical potential damage from a Category B Tropical Storm includes minor damage to buildings of light material; major damage to huts made of thatch or loosely attached corrugated sheet metal or plywood; unattached corrugated sheet metal and plywood may become airborne; wooden signs not supported with guy wires blown down; moderate damage to banana trees, papaya trees and most fleshy crops; and large dead limbs, ripe coconuts, many dead palm fronds, some green leaves, and small branches blown from trees.

(5) Typhoon Category 1 (minimal typhoon). A tropical cyclone with maximum sustained winds within the range of 74-95 mph. Peak gusts are 95-120 mph. Usually "eye" formation begins in a Typhoon. Typical potential damage from a Category 1 Typhoon includes corrugated metal and plywood stripped from poorly constructed or termite-infested structures and may become airborne; a few wooden, non-reinforced power poles tilted, and some rotten poles broken; some damage to poorly constructed, loosely attached signs; major damage to banana trees, papaya trees and fleshy crops; some young trees downed when the ground is saturated; some palm fronds crimped and bent back and many

ripe coconuts blown down; Less than 10% defoliation of shrubbery and trees; up to 10% defoliation of tangantangan; and some small tree limbs downed such as mango; African tulip and acacia. Overall damage can be classified as minimal.

(6) Typhoon Category 2 (moderate typhoon). A tropical cyclone with maximum sustained winds within the range of 96-110 mph. Peak gusts are 121-139 mph. Typical potential damage from a Category 2 Typhoon includes several rotten wooden power poles snapped and many non-reinforced wooden poles tilted; some secondary power lines downed; damage to wooden and tine roofs but no damage to well constructed wooden, sheet metal, or concrete buildings; considerable damage to structures made of light materials; major damage to poorly constructed, attached signs; exposed banana trees and papaya trees totally destroyed; 10-20% defoliation of trees and shrubbery; up to 30% defoliation of tangantangan; light damage to bamboo; many palm fronds crimped and bent and several green fronds ripped from palm trees; some green coconuts blown from trees; and some trees blown down, especially shallow rooted ones such as acacia, mango, and breadfruit when the ground becomes saturated. Overall damage can be classified as moderate.

(7) Typhoon Category 3 (strong typhoon). A tropical cyclone with maximum sustained winds within the range of 111-130 mph. Peak gusts are 140-167 mph. Typical potential damage from a Category 3 Typhoon includes a few non-reinforced hollow-spun concrete power poles broken or tilted and many nonreinforced wooden power poles broken or blown down; many secondary power lines downed; practically all poorly constructed signs blown down; some stand-alone steel framed signs bent over; some roof, window, and door damage to well-built, wooden and metal residences and utility buildings; non-reinforced cinderblock walls blown down; many buildings made of light materials destroyed; minimal glass window failure due to pressure forces associated with extreme gusts; chain link fences begin to blow down; light cars begin to be moved and occasionally overturned; a few high-paneled vehicles (buses, vans, etc.) blown over; some unsecured construction cranes blown down; air is full of light projectiles and debris; major damage to shrubbery and trees; 50% of palm fronds bent or blown off; numerous ripe and green coconuts blown off coconut palms; crowns blown off a few palm trees; up to 10% of coconut palms blown down; moderate damage to bamboo; some large trees like breadfruit, monkeypod, mango, acacia, and Australian pines blown down when the ground becomes saturated; 30-50% defoliation of many trees and shrubs; and 70% defoliation of tangantangan. Overall damage can be classified as extensive.

(8) Typhoon Category 4 (very strong). A tropical cyclone with maximum sustained winds within the range of 131-155 mph. Peak gusts are 168-197 mph. When a Category 4 typhoon generates sustained winds of 150 mph or greater it is called a Super Typhoon. Typical potential damage from a Category 4 Typhoon includes some reinforced hollow-spun concrete and many reinforced wooden power poles blown down; numerous secondary and a few primary power lines downed; extensive damage to non-concrete roofs; complete failure of many roof structures, window frames, and doors; many well-built wooden and metal structures severely damaged or destroyed; considerable glass failures due to flying debris and explosive pressure forces created by extreme wind gusts; weakly reinforced cinderblock walls blown down; complete disintegration of structures made of light materials; most small and medium-sized steel-framed signs
bent over or blown down; some secured construction cranes and gantry cranes blown down; some fuel storage tanks may rupture; air is full of large projectiles and debris; shrubs and trees 50-90% defoliated; up to 100% of tangantangan defoliated; up to 75% of palm fronds bent or blown off; many crowns stripped from palm trees; numerous green and virtually all ripe coconuts blown from trees; severe damage to bamboo; many large trees blown down (palms, breadfruit, mango, monkeypod, acacia, and Australian pines); considerable bark stripped from trees; most standing trees are void of all but the largest branches, with remaining branches stubby in appearance; numerous trunks and branches are sandblasted; and patches of panax, tangantangan, and oleander bent over or flattened. Overall damage can be classified as extreme.

(9) Typhoon Category 5 (devastating). A tropical cyclone with maximum sustained winds within the range of 156-194 mph. Peak gusts are 198-246 mph. Typical potential damage from a Category 5 Typhoon includes severe damage to some solid concrete power poles, to numerous reinforced hollow-spun concrete power poles, to many steel towers, and virtually all wooden poles; virtually all secondary and most primary power lines downed; total failure of non-concrete residences and industrial buildings; some structural damage to concrete structures, especially from large debris, such as cars, large appliances, etc.; extensive glass failure due to impact from flying debris and explosive pressure forces during extreme gusts; many wellconstructed storm shutters ripped from structures; some fuel storage tanks rupture; nearly all construction cranes blown down; air full of very large and heavy projectiles and debris; shrubs and trees up to 100% defoliated; numerous large trees blown down; up to 100% palm fronds bent or blown off; numerous

crowns blown from palm trees; virtually allcoconuts blown down from trees; most bark strippedfrom trees; and most standing trees are void or all but the largest branches, which are very stubby in appearance and severely sandblasted. Overall damage can be classified as catastrophic.

The Office of Civil Defense partners with the NWS and the military to receive advance and direct forecasts of severe weather threatening Guam. In the interest of public safety, the Office of Civil Defense incorporates JTWC/NWS tropical cyclone track prediction uncertainty risk into the decision making process.

When forecasts of strong thunderstorms or damaging winds (39-57 mph sustained winds) are received, the Office of Civil Defense, upon coordination with the Governor, may direct certain situation specific preparedness actions which may be impacted by the severe weather (e.g., cancel a government event, close government schools early, etc.), without disruption to overall government operations. Damaging winds may be generated by Tropical Storm Categories A or B.

When forecasts of Damaging winds threatening Guam are received, the Office of Civil Defense directs government-wide preparedness or response actions which may affect the entire island's population and businesses. Damaging winds can be generated by either strong Category B Tropical Storms or typhoons. Government-wide preparedness or response actions are organized into four action levels. These levels are called Tropical Cyclone Conditions of Readiness (COR) or just "Conditions". These levels are called Tropical Cyclone CORs, not Typhoon CORs, since damaging winds can be generated by both strong Tropical Storms as well as Typhoons. Use of Tropical Cyclone Conditions, or just Conditions, is more commonly used than Tropical Cyclone CORs. These Conditions are implemented or set by the Governor through the Office of Civil Defense in coordination with the military. The setting of each Condition is based on the forecasted onset of damaging winds as follows:

Condition 4 (normal, 72 hours). Damaging winds (39 mph sustained winds or higher) impacting the island are possible within 72 hours. Due to the risk of tropical cyclones developing and impacting the island with damaging winds within 72 hours any part of the year, the normal Condition on Guam is level 4.

Condition 3 (within 48 hours). Damaging winds impacting the island are possible within 48 hours. Condition 3 government-wide preparedness checklists are initiated usually prior to the setting of Condition 3 in order to complete all Condition 3 checklists before Condition 2 is set.

Condition 2 (within 24 hours). Damaging winds impacting the island are possible within 24 hours. Condition 2 government-wide preparedness checklists are initiated usually prior to the setting of Condition 2 in order to complete all Condition 2 checklists before Condition 1 is set. Condition 1 checklists, especially outdoor requirements, are competed simultaneously with Condition 2 requirements.

Condition 1 (within 12 hours or occurring). Damaging winds are expected within 12 hours or are occurring. No outdoor activities allowed, except for extreme emergencies.

Upon the departure of a tropical cyclone's damaging wind threat, and significant safety concerns are resolved (e.g., major roads are cleared of hazards), the island is returned to the Condition 4 setting to allow appropriate general recovery actions to begin.

B. Assumptions

The most predictable natural disaster on Guam is the tropical cyclone. The vulnerability to the people and property on Guam is 100%. Therefore, the entire population, public and private, must prepare for the event to minimize injury and damage, and to better implement recovery.

Advance and direct severe weather predications will be provided by NWS and with partnering, also the military weather services of U.S. Naval Forces Marianas. Upon establishment of Condition settings, coordinated preparation activities by the public, private and military sectors will be conducted. The Office of Civil Defense (OCD) will keep the Office of the Governor informed and appropriate actions will be taken to reduce the damaging wind effect on island residents, businesses and commerce.

Due to Guam's geographic isolation, off-island assistance may not be available for at least 72 hours. Therefore, the island community must work together and utilize all available local resources.

Tropical Cyclone Conditions are set at the authority of the Governor in coordination with the military represented by U.S. Naval Forces Marianas. The setting of Conditions may not be exactly correlated with established time periods (could be set either before or after established time periods) in order to take into account case specific safety or economic situations. Conditions may not be set in consecutive order and may even be reversed as needed to adapt to rapidly changing tropical cyclone data.

The Governor, through the Office of Civil Defense, has the authority to modify, delete or add to any established contingency checklist or procedure, for the purpose of adapting or balancing government actions to needs and risk. Such changes, when necessary, will be publicly announced.

IV. Concept of Operations

All Response Agencies will be recalled at Condition 3, activated at Condition 2 and report to the Emergency Operations Center (EOC) at the Office of Civil Defense for the heavy weather briefs. Response Agencies will then initiate their agency severe weather preparation checklists and their respective agency's Standard Operating Procedures to prepare and respond to the severe weather threat. Agencies will establish a Plan of Action identifying agency preparations securing vulnerable critical facilities, response resources (equipment, vehicles, materials & supplies inventory), response team staffing, needs and resource shortfalls. Updated copies of this plan and checklists will be provided to the Office of Civil Defense.

The Office of Civil Defense will coordinate the activation and manage the EOC before, during and after the tropical cyclone threat. Emergency shelters and mass care will also be considered and managed.

V. Organization and Assignment of Responsibilities

A. Organization

When Condition 3 is announced, a skeleton crew will man the EOC. Upon announcement of Condition 2, Office of Civil Defense will fully activate EOC, and the Response Agencies will report to the EOC to receive initial instructions and report forms. The EOC Director will coordinate all agency tasking and action items under a Unified Command System organization.

B. Assignment of Responsibilities

The activities required to address all emergencies or disasters have been identified as either primary or support functions. The assignment of Response Agency functions has been identified in the Functional Annex Section .

VI. Administration and Logistics

Upon activation of the Response Agencies, the Department of Administration (DOA) manages and tracks all emergency and disaster related expenses. When Condition 3 is announced the Administration and Logistics function of the Unified Command System will begin preparations for response and recovery operations.

DOA will establish emergency accounts for all response agencies to accommodate pre-event preparedness expenditures and activities up to deactivation of the response effort following the emergency or disaster.
The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all response related materials and resources. Along with the Office of Civil Defense, GSA will receive, inventory and manage all response related resources and request for materials by establishing areas to collect, stage and distribute all requests for response materials and resources.

VII. Plan Development and Maintenance

The Administrator of the Office of Civil Defense (OCD) is responsible for the maintenance and revision of this annex.

The OCD will review and exercise this Annex on an annual basis, or as needed. Updates and revisions to the Annex will be made accordingly.

A pre-typhoon season exercise will be conducted sometime between April-June per year as a part of Response Agency readiness activities.

VIII. Authorities and References

A. Authorities

This plan is issued under the authority of, and in accordance with the provision of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

- The Organic Act of Guam, as amended and related statutes, Chapter 8AGuam-Title-48 U.S.C.A. 1422
- Public Law 93-288, Disaster Relief Act of 1974
- Guam Government Code 8501-8515, (Public Law 1-21)
- Guam Government Code 62020
- Executive Order of the Governor 91-09, dated March 25, 1991.
- Guam Government Code 40400

B. References

The following publications/planning documents were utilized in formulating this Plan:

- The Federal Response Plan (9230.1 PL, FEMA)
- Guide for All-Hazard Emergency Operations Planning (SLG 101, FEMA)

IX. Appendices

B

HAZARD-SPECIFIC ANNEX B
EARTHQUAKES & LANDSLIDES

Primary Agency: OCD, GFD, GPD, DPW, Mayors' Council
Support Agency: All Agencies

I. Nature of the Hazard

A sudden, violent shaking or movement of part of the earth's surface caused by the abrupt displacement of rock masses, usually within the upper 10 to 20 miles of the earth's surface. The earthquake hazard may consist of:

A. Ground Motion - Vibration and shaking of the ground during an earthquake is the most far reaching effect and causes the most damage to buildings, structures, lifelines, etc.

B. Ground Surface Fault Rupture - The ground shaking is the result of a rupture of a fault beneath the surface. When the ground shaking results in a rupture of the surface of ground, an opening of up to 20 feet may occur.

C. Liquefaction -The ground temporarily loses its strength and behaves as a viscous fluid (similar to quicksand) rather than a solid.

D. Landslides - Sometimes an earthquake causes a landslide to occur. This involves a rock fall and slides of rock fragments on steep slopes.

E. Tsunamis - Tsunamis are sea waves produced by an undersea earthquake. These sea waves caused by the earthquake can reach 80 feet and can devastate coastal cities and low-lying coastal areas.

F. Secondary Hazards - Consequences of earthquakes may include fire, HAZMAT release, or structural failure, among others.

II. Purpose

The purpose of this annex is to provide an outline of activities that would be implemented in response to an Earthquake/Landslide emergency. This annex establishes a format that identifies actions to be taken before, during and immediately following an event.

III. Situation and Assumptions

A. Situation

Earth tremors are common to the Northern Mariana Island chain, and the potential for a major earthquake is high. Although the Mariana Island groups are relatively small landforms above sea level, the sub-sea mountain range, which supports these islands, is the earth s tallest; and the Marianas Trench, which parallels the range, is the earth s deepest valley. Earthquake risk in Guam is caused by the island s proximity to the Mariana Trench, where the subduction of the Pacific Plate beneath the Philippine Plate occurs. This motion leads to earthquakes throughout the Mariana Island chain.

The 1849 Guam earthquake and tsunami caused extensive damage to Agana, the largest city on Guam, as did the 1902, 1975, and 1978 earthquakes. The 1993 Guam earthquake measured Mw7.8, which was larger than the maximum event estimated by most scientists for that area at the time. Some high-rise buildings in Tumon Bay, mostly hotels, sustained enough damage to warrant demolition, while liquefaction and lateral spreading resulted in an estimated $8-10 million in repair costs to the main port for Guam.

B. Assumptions

1. Earthquakes will come with no warning.
2. The threat of landslides and tsunami may accompany seismic activity. Both public and private sectors will be effected
3. Disruption of the infrastructure will delay immediate response.

IV. Concept of Operations

Following the event, all Response Agency Coordinators (RAC) are to report immediately to the Emergency Operations Center (EOC) to coordinate initial damage reports. Also, EAS will be activated for residents living in low lying coastal areas. The RAC in conjunction with Office of Civil Defense (OCD) will form assessment teams to initiate a Rapid Damage Assessment. OCD will make a course of action recommendation to the Governor based on the Assessment team s assessment of damage.

The OCD will coordinate the activation of the RAC and manage the Emergency Operations Center following the event. If warranted, a Declaration of Emergency will be issued by the Governor. Implementation of the appropriate Functional Annexes will follow the RAC activation.

Debris removal operations and shelter & mass care.

If warranted, the Governor will request FEMA's deployment of the Federal Emergency Response Team to conduct an assessment and verify damage in anticipation of a request for a Presidential Disaster Declaration.

V. Organization and Assignment of Responsibilities

A. Organization

The Response Agencies will upon activation of the Emergency Operation Center report to the EOC to receive initial status of the incident, provide an initial damage assessment, Annex A, receive initial instructions and begin to coordinate a response effort. The EOC Director will then coordinate all agency tasking and action items under the Unified Command System.

B. Assignment of Responsibilities

The activities required to address all emergencies or disasters have been identified as either primary or support functions. The assignment of Response Agency functions has been identified in the Functional Annex Section.

It is anticipated that all Response Agencies will be activated.

VI. Administration and Logistics

Upon the activation of Response Agencies, the Department of Administration (DOA) will manage and track all emergency/disaster related expenses. The Administration and Logistics function of the Unified Command System will be the lead in coordinating requirements in the response effort.

DOA will establish emergency accounts for all response agencies to accommodate pre-event preparedness expenditures and activities up to deactivation of the response effort following the emergency or disaster.

The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all response related materials and resources. Along with the Office of Civil Defense, GSA will receive, inventory and manage all response related resources and request for materials by establishing areas to collect, stage and distribute all requests for response materials and resources.

VII. Plan Development and Maintenance

The Administrator of the Office of Civil Defense is responsible for the maintenance and revision of this annex.

The Office of Civil Defense will review and exercise this Annex on a bi-annual basis. Updates and revisions to the Annex will be made accordingly.

An earthquake exercise will be conducted in the 2nd or 3rd quarter as a part of Response Agency readiness activities.

VIII. Direction and Control

All issues of policy, coordination of operations and the direction and control of preparation and response efforts rests with the Office of Civil Defense. All Response Agencies will, by their activation, coordinate activities within the structure and organization of the Operations Section.

IX. Authorities and References

A. Authorities

This plan is issued under the authority of, and in accordance with the provisions of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

- The Organic Act of Guam, as amended and related statutes, Chapter 8A-Guam-Title-48 U.S.C.A. 1422
- Public Law 93-288, Disaster Relief Act of 1974
- Guam Government Code 8501-8515, (Public Law 1-21)
- Guam Government Code 62020
- Executive Order of the Governor 91-09, dated March 25, 1991.
- Guam Government Code 40400

B. References

- The following publications/planning documents were utilized in formulating this Plan:

- The Federal Response Plan (9230.1 PL, FEMA)
- Guide for All-Hazard Emergency Operations Planning (SLG 101, FEMA)

X. Appendices

A. Annex A - Damage Assessment
B. Annex E - Communication & Warning
C. Annex K - Sheltering & Mass Care
D. Annex H - Federal Response Coordination

XI. Tabs

A. Seismicity of Guam

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EARTHQUAKE SAFETY TIPS

During An Earthquake, Keep Calm ... Panic Kills

➢ **If you are indoors:**
- Get under a sturdy piece of furniture (desk or table) or doorway
- Stay clear of windows and exterior doors

➢ **If you are outside:**
- Get to an open area/space away from buildings, coconut trees, utility wires/poles

➢ **If you are in a car:**
- Stop the car but stay inside.
- Do not stop on a bridge, under a tree, utility wires/pole, or sign

➢ **If on a bus:**
- Stop the bus quickly and safely in an open area
- Do not stop on a bridge, under a tree, utility wire/pole, or sign
- Keep students on the bus

After An Earthquake ... Stay Vigilant!

- Do not enter partially collapsed or damaged building
- Report structural damages to local officials
- Avoid exposed electrical wiring (indoors or out)
- Do not use candles, matches, or open flames indoors because of possible gas leaks
- Check home for any possible fire or fire hazards
- Turn off main gas valve if leak is suspected
- Turn off water main valve if you see that water pipes
- Shut off electrical power at the control box, if there is any damage to your house wiring
- Only use the phone for emergencies (injuries, fire, trapped pole)
- Check your neighbors to see if they need assistance
- Be prepared for aftershocks
- Stay off the streets. If you must travel, be on a look out for downed trees/utility poles and weakened bridges
- Locate/have ready Emergency Supply Kit
- Cooperate with public safety officials

Classroom Hazard Inventory

- Unsecured bookcases
- Unsecured wall shelves
- Free-standing cabinets
- Hanging plants
- Potential obstructions near doorways
- TV monitor unsecured on platform
- TV monitor on wheeled cart
- Music room piano on wheels
- Heavy objects on high shelves

Earthquake Preparations

- Repair defective electrical wiring, leaky gas, and inflexible utility connections
- Bolt down water heaters and propane gas tanks
- Know where and how to shut off electricity, gas, and waters at main switches/valves
- Place large or heavy objects on lower shelves
- Securely fasten shelves to walls. Brace or anchor high or top-heavy objects
- Store bottled food, glass china, and other breakables on lower shelves
- Anchor overhead lighting fixtures solidly in place
- Check and repair deep plaster cracks in ceilings and foundations
- Hold occasional earthquake drills so each member of your family knows what to do
- Develop a family plan for reuniting after an earthquake
- Review insurance to determine coverage for earthquake damage

HAZARD-SPECIFIC ANNEX C — TAB A
TSUNAMIS CHECKLIST

A. Preparedness Measures

- ☐ The OCD will activate the Emergency Alert System (EAS) to alert the general public.

  Tsunami Evacuation Staging Areas will be identified, general public "what to do" messages will be made and the Village Mayors notified. See appendix.

- ☐ Primary response agencies begin agency specific pre-event preparations
- ☐ EOC prepares for activation
- ☐ All emergency communication equipment (hand-held radios and cellular phones) tested and ready for emergency use
- ☐ Identify/Pre-stage equipment
- ☐ Information & Planning section will prepare to develop situation status reports *and remain in communication with the JTWC in Hawaii and the NWS on Guam.*
- ☐ Contact DHS/FEMA
- ☐ Initiate contact with all media sources

B. Response Efforts

- ☐ Unified Command structure will coordinate all response activities from the EOC
- ☐ Implementation of the ***City Watch*** notification system.
- ☐ Emergency Alert Systems activated
- ☐ Emergency Vehicles having loud speaker capability will provide on site notification to effected areas
- ☐ Emergency shelters opened
- ☐ Emergency vehicles (buses & vans) deployed to pre-designated locations to assist in evacuation.
- ☐ Response materials, supplies, manpower and equipment identified

- ❑ Information & Planning documents Response Agency/ EOC actions and request for assistance.

HAZARD-SPECIFIC ANNEX C
TSUNAMIS

Primary Agency: OCD, Mayors Council, GPD, GFD, DPW
Supporting Agency: ARC, DOE, DHPSS, GNG

I. *Nature of the Hazard*

A tsunami (pronounced "soo-nahm'ee") is a series of waves generated by an undersea disturbance such as an earthquake. From the area of the disturbance, the waves will travel outward in all directions, much like the ripples caused by throwing a rock into a pond. The time between wave crests may be from 5 to 90 minutes, and the wave speed in the open ocean will average 450 miles per hour.

Tsunamis reaching heights of more than 100 feet have been recorded. As the waves approach the shallow coastal waters, they appear normal and the speed decreases. Then as the tsunami nears the coastline, it may grow to great height and smash into the shore, causing much destruction.

1. Tsunamis are caused by an underwater disturbance — usually an undersea earthquake, Landslides, volcanic eruptions, and even meteorites can also generate a tsunami.
2. Tsunamis can originate hundreds or even thousands of miles away from coastal areas. Local geography may intensify the effect of a tsunami. Areas at greatest risk are less than 50 feet above sea level and within one mile of the shoreline.
3. People who are near the seashore during a strong earthquake should listen to a radio for a tsunami warning and be ready to evacuate at once to higher ground.
4. Rapid changes in the water level are an indication of an approaching tsunami.

Tsunamis arrive as a series of successive "crests" (high water levels) and "troughs" (low water levels). These successive crests and troughs can occur anywhere from 5 to 90 minutes apart. They usually occur 10 to 45 minutes apart.

II. *Purpose*

The purpose of this annex is to provide an outline of activities that would be implemented in response to a tsunami alert or emergency. This annex establishes a format that identifies actions to be taken before, during and immediately following the flood emergency.

III. Situation and Assumptions

A. Situation

Most often an earthquake or undersea landslide will generate a tsunami. The emergency waves produced by seismic activity will travel along the ocean floor eventually reaching a landmass. When the energy wave reach shallow waters, a greater then normal sea wave results. The wave, or series of waves, because of its height and energy, travels further inland and at greater velocity.

Damage from the wave penetration is greater as the waters recede or "down draw" back to the ocean. The continued pounding of wave penetration and down draw will destroy structures not designed to withstand the repeated force of the tsunami.

B. Assumptions

The greatest threat of a tsunami disaster is along the entire Guam shoreline not protected by natural cliffs. However, given the size of the wave, inland properties are equally at risk. The people and property in vulnerable areas when a Tsunami alert is issued is at danger not only from the wave but the flooding that precedes.

IV. Concept of Operations

When a general condition of flooding occurs, the Office of Civil Defense (OCD) will activate the Emergency Operations Center (EOC) to coordinate response actions. Initial actions would be taken, in an Incident Command structure, by the lead response agencies, the Guam Police Department and the Department of Public Works.

As conditions worsen and property is affected, additional Response Agencies would be activated by the Office of Civil Defense to establish a Unified Command structure at the EOC supporting the Incident Commander.

V. Organization and Assignment of Responsibilities

A. Organization

The Office of Civil Defense (OCD) will receive initial notification via the National Weather Station of the probability of a seismic generated wave. (It is working towards direct Pacific Tsunami Warning Center-notification.) The OCD will then notify the Governor's Office and the Mayors Council while primary response agencies are activated.

The EOC will be activated and Response Agencies will report to coordinate activities, receive initial instructions and report forms from the OCD. The EOC Director will then coordinate all agency tasking and action items.

B. Assignment of Responsibilities

The activities required to address all emergencies or disasters have been identified as either primary or support functions. The assignment of Response Agency functions has been identified in Functional Annex Section.

Not all the Response Agencies will be activated to coordinate response and preparation activities. Only primary response agencies will be required to include GPD, GFD, Mayors Council, GNG, and DPW

In the event that Guam is struck by a Tsunami and shelters are required, DOE, DPHSS, ARC, SA, DOA/GSA, and DoD will also be activated.

VI. Administration and Logistics

Upon the activation of Response Agencies, the Department of Administration (DOA) will manage and track all emergency/disaster related expenses. When activated the Administration and Logistics function of the Unified Command System will be initiated.

DOA will establish emergency accounts for all response agencies to accommodate pre-event preparedness expenditures and activities up to deactivation of the response effort following the emergency or disaster.

The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all response related materials and resources. Along with the Office of Civil Defense, GSA will receive, inventory and manage all response related resources and request for materials by establishing areas to collect, stage and distribute all requests for response materials and resources.

VII. Plan Development and Maintenance

The Administrator of the Office of Civil Defense will be responsible for the maintenance and revision of this annex.

The Office of Civil Defense will review and exercise this Annex on annually. Updates and revisions to the Annex will be made accordingly.

An exercise will be conducted in conjunction with all scheduled earthquake exercises.

VIII. Direction and Control

All issues of policy, coordination of operations and the direction and control of preparation and response efforts rests with the Office of Civil Defense. All Response Agencies will, by their activation, coordinate activities within the structure and organization of the Operations Section.

IX. Authorities and References

A. Authorities

This plan is issued under the authority of, and in accordance with the provisions of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

- The Organic Act of Guam, as amended and related statutes, Chapter 8A-Guam-Title-48 U.S.C.A. 1422
- Public Law 93-288, Disaster Relief Act of 1974
- Guam Government Code 8501-8515, (Public Law 1-21)
- Guam Government Code 62020
- Executive Order of the Governor 91-09, dated March 25, 1991.
- Guam Government Code 40400

B. References

The following publications/planning documents were utilized in formulating this Plan:

- The Federal Response Plan (9230.1 PL, FEMA)
- Guide for All-Hazard Emergency Operations Planning (SLG 101, FEMA)

X. Appendices

A. Tsunami Evacuation Staging Areas
B. Functional Annex D — Emergency Notification & Warning
C. Functional Annex G —Evacuation Procedures, Evacuation Routes
D. Functional Annex K — Sheltering & Mass Care, Shelter Locations

XI. Tabs

A. Tsunami Checklist

D

HAZARD-SPECIFIC ANNEX D
FLOODING

Primary Agency: DPW, Mayors Council, GFD, GPD
Supporting Agency: OCD, ARC, DOE, GEPA

I. *Nature of the Hazard*

Flooding occurs when normally dry land is inundated with water (or flowing mud). Flooding may result from: bodies of water overflowing their banks, including artificial ones like rapid accumulation of runoff or surface water; typhoon-caused storm surges or earthquake-caused tsunamis; or erosion of a shoreline. (Coastal flooding and erosion are not treated in this attachment.) Typically, the two parameters of most concern for flood planning are suddenness of onset--in the case of flash floods; and flood elevation in relation to topography and structures. Other factors contributing to damage are the velocity or "energy" of moving water, the debris carried by the water, and extended duration of flood conditions. Flooding can happen at any time of the year, but predominates during the rainy season between June and December.

A. Risk Area Guam is at risk from flooding. Apart from a rainy climate, local risk factors, usually present in combination, include:

- *Rivers, Streams, and Drainageways:* These are bodies of water often subject to overflowing. The size of the stream can be misleading; small streams that receive substantial rain, locally or upstream, can overflow their banks. High-velocity, low elevation flooding can be dangerous and damaging. Six inches of moving water can knock a person off his or her feet; 12 inches of water flowing at 10 miles per hour carries the force of a 100 mile-per-hour wind, although the force would be distributed differently on obstacles.
- *Steep Topography:* Steep topography increases runoff water velocity and debris flow. Lack of vegetation to slow runoff is another factor.

II. *Purpose*

The purpose of this annex is to provide an outline of activities that would be implemented in response to a Flooding emergency. This annex establishes a format that identifies actions to be taken before, during and immediately following the flood emergency.

III. Situation and Assumptions

A. Situation

Most often flooding occurs at the onset of a Tropical storm or other cyclonic disturbance. Intensification from Tropical Depression to Typhoon averages approximately 3 days; however, there are cases of such intensification occurring in only 30 hours. It is this presumption that preparedness and response procedures are based. Experience has taught us that intensification from cyclonic disturbances can occur with little to no advance notice.

B. Assumptions

The greatest threat of natural disaster and the most predictable are cyclonic disturbances. The vulnerability to the people and property in Guam when flooding occurs is mainly in the low-lying areas and along the coastal regions where there is a confluence of a watercourse and shoreline.

The National Flood Insurance Program has produced a Flood Insurance Study identifying areas where the probability of flooding is greatest. With this in mind, the private or private sector should be aware of areas subject to flooding and take action to prevent and mitigate the losses due to flooding.

IV. Concept of Operations

When a tsunami alert is issued, the Office of Civil Defense (OCD) will notify the Mayors Council and the Guam Police Department (GPD) so that residents can be notified and evacuated to pre-identified shelters. The Emergency Operations Center (EOC) will be activated to coordinate response actions and issue warning to residents via the *City Watch* notification system.

With the implementation of the *City Watch* notification system, the Mayors Council will notify Village Mayors to coordinate notification and evacuation efforts in the identified villages. The lead response agencies, the Guam Police and Fire Departments will coordinate protection and evacuation actions with the Village Mayors.

- The Office of Civil Defense will activate the Response Agencies required to support the primary agencies to establish a Unified Command structure at the EOC.

V. *Organization and Assignment of Responsibilities*

A. Organization

Response to a localized flooding event will be conducted using the Incident Command System. The Incident Commander will establish an Incident Command Post to conduct activities on site and coordinate overall response efforts with the Office of Civil Defense. *When and if conditions worsen generating a general condition of flooding, the Incident Command structure will transition to the Unified Command structure at the EOC.*

Upon activation, the Response Agencies will report to the EOC to receive initial instructions and *in-brief on the situation from the EOC Director. The RAC will implement EOC operating procedures coordinating with Information & Planning section to use designated reporting forms, Plans of Action and briefing procedures. The EOC Director* will then coordinate all agency tasking and action items.

B. Assignment of Responsibilities

The activities required to address all emergencies or disasters have been identified as either primary or support functions. The assignment of Response Agency functions has been identified in the Functional Annex Section. Agencies activated as part of the Unified Command include, but will not be limited to:

- Office of Civil Defense
- Guam Police and Fire Departments
- Guam Department of Public Works
- Guam Power Authority
- Guam Water Authority
- Guam Environmental Protection Agency
- Department of Education
- American Red Cross
- Guam National Guard
- Mayors Council
- Department of Administration
- General Services Administration

VI. *Administration and Logistics*

Upon the activation of Response Agencies, the Department of Administration (DOA) will manage and track all emergency/disaster related expenses. When activated the Administration and Logistics function of the Unified Command System will be initiated.

DOA will establish emergency accounts for all response agencies to accommodate pre-event preparedness expenditures and activities up to deactivation of the response effort following the emergency or disaster.

The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all response related materials and resources. Along with the Office of Civil Defense, GSA will receive, inventory and manage all response related resources and request for materials by establishing areas to collect, stage and distribute all requests for response materials and resources.

VII. Plan Development and Maintenance

The Administrator of the Office of Civil Defense will be responsible for the maintenance and revision of this annex

The Office of Civil Defense will review and exercise this Annex on annually. Updates and revisions to the Annex will be made accordingly.

An exercise will be conducted in conjunction with pre-typhoon season exercises in the 4th quarter as a part of Response Agency readiness activities.

VIII. Direction and Control

All issues of policy, coordination of operations and the direction and control of preparation and response efforts rests with the Office of Civil Defense. All Response Agencies will, by their activation, coordinate activities within the structure and organization of the Operations Section.

IX. Authorities and References

A. Authorities

This plan is issued under the authority of, and in accordance with the provisions of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

- The Organic Act of Guam, as amended and related statutes, Chapter 8A-Guam-Title-48 U.S.C.A. 1422
- Public Law 93-288, Disaster Relief Act of 1974
- Guam Government Code 8501-8515, (Public Law 1-21)
- Guam Government Code 62020
- Executive Order of the Governor 91-09, dated March 25, 1991.
- Guam Government Code 40400

B. References

The following publications/planning documents were utilized in formulating this Plan:

- The Federal Response Plan (9230.1 PL, FEMA)
- Guide for All-Hazard Emergency Operations Planning (SLG 101, FEMA)

X. Appendices

A. Functional Annex E - Communication & Warning
B. Functional Annex K - Sheltering & Mass Care
C. Functional Annex G — Evacuation Procedures, Evacuation Routes

XI. Tabs

A. Flooding Checklist

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Tsunami evacuation/staging areas

Please note: If the roads leading to your staging area are blocked with fallen debris or power poles, seek higher ground within your village.

- Agana (downtown) low-lying areas
  Head to Agana Heights (Government Hose Overflow Parking Lot)
- East Agana low-lying areas
  Head to Tiyan (Guam Police Headquarters) using Route 8
- Agat low-lying areas
  - From Namu River (Old Agat) to the Old Cemetery head to Southern High School.
  - From Old Cemetery to Fanili area head to Oceanview Middle School.
  - Umang area head to Umang Road (inland)
  - Pagachao area head to Mao Drive (Pagachao Subdivision)
  - From Nimitz Beach Park to Talayac head to Upper Santa Ana (Transfer Station)
- Anigua low-lying areas Head to Agana Heights (Government Hose Overflow Parking Lot)using Route 7
- Asan and Maina low-lying areas
  Head to Nimitz Hill (Baseball Field) using Route 6
- Inarajan low-lying areas
  - From Lada through Inarajan Pool head to Ija Subdivision
  - From Ajayan Point through Lada head to UOG Farm
  - Village Area head to Inarajan /Elementary School
  - Chagami and Chagamin Lagu area head to Southern Regional Public Health Center
- Merizo low-lying areas
  - From Chalan Pedro Tainatongo through Chalan Quinene head to Chalan Jesus Quinene
  - From Chalan Quinene to Chalan J. A. Cruz head to Merizo Elementary/
    Community Center

- From Chalan J. A. Cruz to Bile Bay head to Fort Soledad

- Piti low-lying areas
  Head to Top O The Mar parking lot (Route 6)

- Ordot/Chalan Paga low-lying areas
  Pago Bay head to Ordot/Chalan Pago Community Center or M.U. Lujan Elementary School in Yona

- Talofofo low-lying area
  - From Togcha Cemetery to Beja Road head to Windward Hills Golf Course area using Route 17
  - From Beja Road to Talofofo Bay (surf area) head to Notre Dame School using Route 4A

- Tamuning/Tumon low-lying areas
  - From Alupang area through oka Point head to ITC Building or U.S. Postal area (Route 1,14,30, & 30A)
  - From Ypao Point to Ypao Beach head to St. Anthony Church
  - From Ypao Beach to Fujita Hotel head to JFK High School (Route 14A)
  - From Fujita Hotel through Gun Beach head to Pia Marine (Pale San Vitores)

- Umatac low-lying areas
  - From Toguan through Sanchez elementary School head to Fort Soledad area.
  - From Sanchez Elementary School through Castizo area head to I Memorias Para I Laahita Vista Points.

HAZARD-SPECIFIC ANNEX D — TAB A
FLOODING CHECKLIST

A. Preparedness Measures

- ❑ Office of Civil Defense activates notification and warning messages alerting public to make preparations for oncoming storm.

  Response agencies will be activated to receive an in-brief so as to begin agency specific pre-event preparations

- ❑ EOC prepares for activation
- ❑ All emergency communication equipment (hand-held radios and cellular phones) tested and ready for emergency use
- ❑ Information & Planning initiate the situation report (SITREP) process
- ❑ Initiate contact with all media sources
- ❑ Contact/notify DHS/FEMA

B. Response Efforts

- ❑ Incident Command response to isolated incidents transiting to a Unified Command structure as/and if conditions worsen to a general condition of flooding
- ❑ Governor may issue Emergency Proclamation
- ❑ Implement Functional Annex E, Emergency Alert Systems activated
- ❑ Implement Functional Annex K
- ❑ Vulnerable and critical public facilities secured
- ❑ Implement Functional Annex G
- ❑ Emergency vehicles (buses & vans) deployed to pre-designated locations to assist evacuation.
- ❑ Response materials, supplies, manpower and equipment identified
- ❑ Information & Planning documents Response Agency request for assistance
- ❑ Contact/notify DHS/FEMA

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HAZARD-SPECIFIC ANNEX F
DROUGHT

Primary Agency: OCD, GWA
Supporting Agency: GFD, DOAG, GEPA, DPW, GNG, ML

I. Purpose

The purpose of this annex is to provide an outline of activities that would be implemented when a Drought emergency is declared. This annex establishes a format that identifies actions that must be taken in as a drought year is predicted, and actions that are taken as the condition is realized.

Preparation first, but prepare to respond.

- Water conservation
- Grassland Fire awareness
- MOU agreements with other jurisdictions

Weekly meetings will be required to coordinate activities and functions

II. Situation and Assumptions

A. Situation

Drought conditions usually follow El Nino or wet years. As annual rainfall precipitation rates drop, the Western Pacific experiences prolonged periods when the island experiences drought conditions.

B. Assumptions

The greatest threat surrounding conditions of drought are grass or wild-land fires and low water tables in reservoirs and subterranean aquifers. The vulnerability to the people and property in Guam is 100%. Therefore, the entire population, public and private, must prepare for the event so that response to its aftermath can be coordinated efficiently and effectively.

III. Concept of Operations

The Office of Civil Defense (OCD), along with Guam Waterworks Authority (GWA), will keep the Office of the Governor informed so that appropriate actions can be taken to minimize the effect on the Guam residents, businesses and commerce.

OCD and GWA will coordinate the monitoring and tracking of events that will result in a drought condition or the possibility of a drought condition. The OCD will establish a Workgroup from appropriate Government of Guam, federal, and military Response Agencies, which will meet on a periodic basis to develop a Plan of Action which can be presented to the Governor for his approval.

The Plan of Action will address preparations and conservation measures that can be taken as the drought becomes more evident. Elements of the Plan of Action will include, but not limited to:

- Water Conservation
- Grassland Fire Awareness
- MOUs with other agencies and jurisdictions
- Public Service Announcements and Instructions to the residents
- Notification to DHS/FEMA

After the Plan of Action as been approved by the Governor, OCD will convene the Workgroup to meet on a weekly basis, or as the situation dictates, to coordinate activities and functions identified in the Plan of Action.

IV. Organization and Assignment of Responsibilities

A. Organization

The OCD will coordinate the Response Agencies comprising of the Drought Workgroup, establishing work-sessions, meeting schedules and implementation of the Plan of Action as the situation dictates. The Drought Workgroup will meet at the EOC and remain activated at the Governor's pleasure.

B. Assignment of Responsibilities

The Response Agencies participating in the Drought Workgroup will include but not be limited to: OCD,GFD, DOAG, GEPA, DPW, GNG, ML, GWA MCOG.

V. Administration and Logistics

Upon the activation of Response Agencies the Department of Administration (DOA) will manage and track all emergency related expenses. DOA will establish accounts when required to accommodate expenditures and activities through deactivation of the effort.

The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all materials and resources. Along with the Office of Civil Defense, GSA will oversee the Distribution and Supply of materials and resources required.

VI. Plan Development and Maintenance

The Administrator of the Office of Civil Defense will be responsible for the maintenance and revision of this annex

The Office of Civil Defense will review plans and meet with the Response Agencies comprising the Drought Workgroup on a periodic basis. Updates and revisions to the Annex will be made accordingly.

VII. Direction and Control

All issues of policy, coordination of operations and the direction and control of preparation and response efforts rests with the Office of Civil Defense. All Response Agencies will, by their activation, coordinate activities within the structure and organization of the Operations Section.

VIII. Authorities and References

A. Authorities

This plan is issued under the authority of, and in accordance with the provisions of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

- The Organic Act of Guam, as amended and related statutes, Chapter 8A-Guam-Title-48 U.S.C.A. 1422
- Public Law 93-288, Disaster Relief Act of 1974
- Guam Government Code 8501-8515, (Public Law 1-21)
- Guam Government Code 62020
- Executive Order of the Governor 91-09, dated March 25, 1991.
- Guam Government Code 40400

B. References

The following publications/planning documents were utilized in formulating this Plan:

- The Federal Response Plan (9230.1 PL, FEMA)
- Guide for All-Hazard Emergency Operations Planning (SLG 101, FEMA

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HAZARD-SPECIFIC ANNEX G
HAZARDOUS MATERIALS

Primary Agencies: GFD, GEPA
Supporting Agencies: GPD, DPHSS, DPW, OCD, DOD, DOA/GSA, GMH

I. *Nature of the Hazard*

Definition of a risk area for hazardous materials depends on the definition of "hazardous materials." Many Federal laws and regulations exist to help the planner do just that; however, since the various lists overlap and serve different purposes (identifying acceptable quantities for "wastes" and "pollutants," reportable quantities for "emergency releases," etc.), this chapter will use the term "hazardous materials" in a broad sense to include:

- Explosive, flammable, combustible, corrosive, oxidizing, toxic, infectious, or radioactive materials that, when involved in an accident and released in sufficient quantities, put some portion of the general public in immediate danger from exposure, contact, inhalation, or ingestion.

For a discussion of the different lists of hazardous materials, see EPA's A Review of Federal Authorities for Hazardous Materials Accident Safety, *Chapter 4. Note that substances not on these lists may still be hazardous.*

A. Risk Areas

Areas at risk for hazardous materials transportation incidents lie along highways, pipelines, rivers, and port areas. Organizations with facilities that produce, process, or store hazardous materials are at risk, as are organizations with facilities for the treatment, storage, or disposal of hazardous wastes. These risks are compounded by natural hazards (e.g., earthquakes, floods) or, for highway transportation of hazardous materials, poor weather conditions. In addition, other kinds of facilities (e.g., for natural gas) may contribute to risks posed by hazardous materials facilities.

II. *Purpose*

This purpose of this annex is to establish a plan for responding to, containing and managing the consequence of a Hazardous Materials incident.

III. Situation and Assumptions

Hazardous Materials incidents are by nature either nuclear, biological or chemical (NBC), but not necessarily the result of an act of terrorism. Because of the seriousness of a Hazardous or Toxic Materials incident the Department of Public Health & Social Services in conjunction with the Guam Fire Department s Emergency Medical Services will address each incident and the possible consequences on the health and safety of the public.

A. Situation

As a result of our economy and development of the island infrastructure the use of toxic and hazardous materials is a common reality. In that regard a hazardous materials incident could occur any time, night or day, at any location on Guam.

B. Assumptions

1. There may be no warning or time to determine it the incident is a terrorist act.
2. First responders will be required to sustain their effort for at least 72 hours.
3. Antidotes for a biological incident will largely need to come from outside the jurisdiction of Guam
4. Federal military assets may not be readily available at the incident scene.

IV. Concept of Operations

The Incident Command System will establish the initial response to all Hazardous Materials incidents. The first responder will be the Guam Fire Department and GPD.

Upon arrival at the scene an Incident Commander (IC) will be identified from the responding Fire unit and establish the Incident Command Post (CP). In all instances the IC will establish immediate communication and request representation at the CP from the Department of Public Health & Social Service and the Guam Environmental Protection Agency.

In some situations, transition of the Incident Command from the Fire Department to the Guam Environmental Protection Agency may be required. Once established at the CP, the Incident Commander will communicate with the Office of Civil Defense so that required response agencies can establish the Unified Command structure to support the needs of the Incident Commander.

Note: Need to reference the following: Notification of GMH Decon Plan, Establish JIC, and Field Decon.

V. *Organization and Assignment of Responsibilities*

A. Organization

The Guam Fire Department will be responsible for establishing an Incident Command System and a field command post in response to the incident, in conjunction with the Guam Environmental Protection Agency and the Department of Public Health & Social Services. When activated, required Response Agencies will report to the Emergency Operations Center to receive initial briefing and instruction from the Office of Civil Defense unless directed to the Incident Command Post by the Incident Commander.

If additional resources are required, the primary agency will make a request to the Director of the EOC. The Director will then coordinate the request with the support agencies at the EOC.

B. Assignment of Responsibilities

The Office of Civil Defense will coordinate the Response Agency Coordinators (RAC) within a Unified Command Structure at the Emergency Operations Center. *(Note: Need to reference evaluation plans shelter in place. Notification/warning (EAS)).*

The primary role of the Guam Response Agencies (RAC) is to support the needs of the Incident Commander and concentrate on the consequences of the incident.

Response Agencies required but are not limited to:

- Office of Civil Defense
- Guam Fire Department
- Guam Police Department
- Guam Environmental Protection Agency
- Department of Public Works
- Department of Public Health & Social Services
- United States Coast Guard
- American Red Cross
- GRSL and GMH

If the incident is deemed to be an act of terrorism, the Federal Bureau of Investigation will assume the lead role in coordinating the response effort of all law enforcement issues of the incident. Supported by local law enforcement and other federal agencies, the FBI will address all crisis management issues and activities. *(Note: Include local resources. (Jack Fernandez) IHP resources.)*

VI. Administration and Logistics

The Guam Fire Department along with the Office of Civil Defense (OCD) will be responsible for record keeping and coordinate the tracking of all emergency/disaster related expenses such as manpower, equipment accountability, overtime hours, equipment and supply inventory and replacement. *Each agency is responsible for tracking all related costs, and submit to OCD.* The OCD Administrator will coordinate all actions and logistical requirements with the Department of Administration (DOA).

The (OCD) Emergency Operations Center is responsible for processing all incoming requests, procurement and distribution of materials deemed necessary to support the response operations by the Incident Commander (IC).

The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all response related materials and resources. In coordination with OCD, GSA will receive, inventory and manage all response related resources and request for material by establishing areas to collect, stage and distribute all request for response materials and resources.

VII. Plan Development and Maintenance

The Guam Fire Department along with the Guan Environmental Protection Agency and the OCD will be jointly responsible for the maintenance and revisions of the basic plan. Each RAC member will be responsible for developing and maintaining agency specific plans.

The OCD along with GFD and GEPA will review, update and exercise this plan on an annual basis. Separate agency drills will be conducted and coordinated with the Office of the Civil Defense. Updates and revisions to the plan will be made accordingly.

VIII. Direction and Control

The Incident Command/Unified Command system will structure the response activities and operations following an act of terrorism. See Section V. Organization and Assignment of Responsibilities.

IX. Authorities and References

A. Authorities This plan is issued under the authority of, and in accordance with the provision of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

- The Organic Act of Guam, as amended and related statutes, Chapter 8A-Guam-Title-48 U.S.C.A. 1422

- Public Law 93-288, Disaster Relief Act of 1974
- Guam Government Code 8501-8515, (Public Law 1-21)
- Guam Government Code 62020
- Executive Order of the Governor 91-09, dated March 25, 1991.
- Guam Government Code 40400

B. References

The following publications/planning documents were utilized in formulating this Plan:

- The Federal Response Plan (9230.1 PL, FEMA)
- Guide for All-Hazard Emergency Operations Planning (SLG 101, FEMA)

IX. Appendices

A. Functional Annex D – Emergency Notification
B. Functional Annex I – Public Information
C. Functional Annex G – Evacuation Procedures, Evacuation Routes

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HAZARD-SPECIFIC ANNEX H
CIVIL UNREST

Primary Agency: GPD, GHS
Supporting Agency: OCD, GNG, GFD, MCOG, All GovGuam LE Units

I. *Purpose*

The purpose of this annex is to establish a plan for response to and management of the consequence surrounding an isolated or multiple incidents threatening the safety of the general population.

II. *Situation and Assumptions*

A. Situation

All incidents of Civil Unrest will require immediate response efforts from law enforcement agencies to secure and contain the scene.

B. Assumptions

The assumptions, which follow, are derived from the situations identified above and form the structure and principles established for this plan.

1. There may be no warning or time to determine if the incident is a terrorist act.
2. First responders will be required to sustain their effort for at least 72 hours
3. Federal military assets may not be readily available at the incident scene and may require the activation of Response Agency support personnel.

III. *Concept of Operations*

The Incident Command System will establish the initial response to all Civil Unrest incidents. The first responder will most likely be the Guam Police Department. Upon arrival at the scene an Incident Commander will be identified from the responding police unit and an Incident Command Post established. Transition of the Incident Command to the Police Tactical Unit will occur after the Police Tactical Unit arrives on scene. After a Command Post has been established, the Incident Commander will communicate with the Office of Civil Defense so that required response agencies can establish a Unified Command structure to support the needs of the Incident Commander. *(Note: Need to reflect GHS and its authority.)*

The response to Civil Unrest includes three major components, which may operate concurrently or consecutively:

A. Crisis Management
B. Consequence Management
C. Technical/Tactical OPS

IV. Organization and Assignment of Responsibilities

A. Organization

The Guam Police Department will be responsible for establishing an Incident Command System and a field command post in response to the incident or incidents. When activated, required Response Agencies will report to the Emergency Operations Center (EOC) to receive initial instructions from the Office of Civil Defense unless directed to the Incident Command Post by the Incident Commander.

If additional resources are required the primary agency will make a request to the Director of the EOC those resources. The Director will then coordinate the request with the support agencies at the EOC.

B. Assignment of Responsibilities

The Office of Civil Defense will coordinate the Response Agency Coordinators (RAC) within a Unified Command Structure at the Emergency Operations Center. The Guam National Guard will be activated, if needed.

The primary role of the Guam Response Agencies (RAC) is to support the needs of the Incident Commander and concentrate on the consequences of the incident.

Response Agencies required but are not limited to:

- Guam Homeland Security
- Office of Civil Defense
- Guam Fire Department
- Guam Police Department
- Department of Customs & Quarantine
- Department of Corrections
- Port Authority Guam
- Guam International Airport Authority
- Department of Public Works
- Department of Public Health & Social Services
- American Red Cross

- Guam National Guard

If necessary, Federal Law Enforcement Agencies may be requested. If the incident is deemed to be an act of terrorism, the Federal Bureau of Investigation will assume the lead role in coordinating the response effort of all law enforcement issues of the incident. Supported by local law enforcement and other federal agencies, the FBI will address all crisis management issues and activities.

V. Administration and Logistics

The Office of Civil Defense (OCD) will be responsible for record keeping and coordinate the tracking of all emergency/disaster related expenses such as manpower, equipment accountability, overtime hours, equipment and supply inventory and replacement. *All agencies are responsible for tracking all related costs, and submit to OCD.* The OCD Administrator will coordinate all actions and logistical requirements with the Department of Administration (DOA).

The Office of Civil Defense (OCD) Emergency Operations Center is responsible for processing all incoming requests, procurement and distribution of materials deemed necessary to support the response operations by the Incident Commander (IC).

The General Services Administration (GSA) will provide the logistics to source, acquire and distribute all response related materials and resources. In coordination with OCD, GSA will receive, inventory and manage all response related resources and request for material by establishing areas to collect, stage and distribute all request for response materials and resources.

VI. Plan Development and Maintenance

The Administrator of the Office of Civil Defense will be responsible for the maintenance and revisions of the basic plan. Each RAC member will be responsible for developing and maintaining agency specific plans.

The Office of Civil Defense will review and update this plan on an annual basis. Separate agency drills will be conducted and coordinated with the Office of the Civil Defense. Updates and revisions to the plan will be made accordingly.

VII. Direction and Control

The Governor of Guam has overall authority and control of the consequences of an act of terrorism, unless the incident occurs on Federal property. The Office of Civil Defense, acting on the Governor's behalf, will activate the Emergency Operations Center and coordinate all response activities. The Incident Command/Unified Command system will be established to for the response activities and operations following an act of terrorism. See Section V. Organization and Assignment of

Responsibilities.

VIII. Authorities and References

A. Authorities

This plan is issued under the authority of, and in accordance with the provisions of the Guam Civil Defense Act of 1951, and supersedes the Territorial Emergency Plan of October 1978. References governing the enactment and implementation of this are:

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